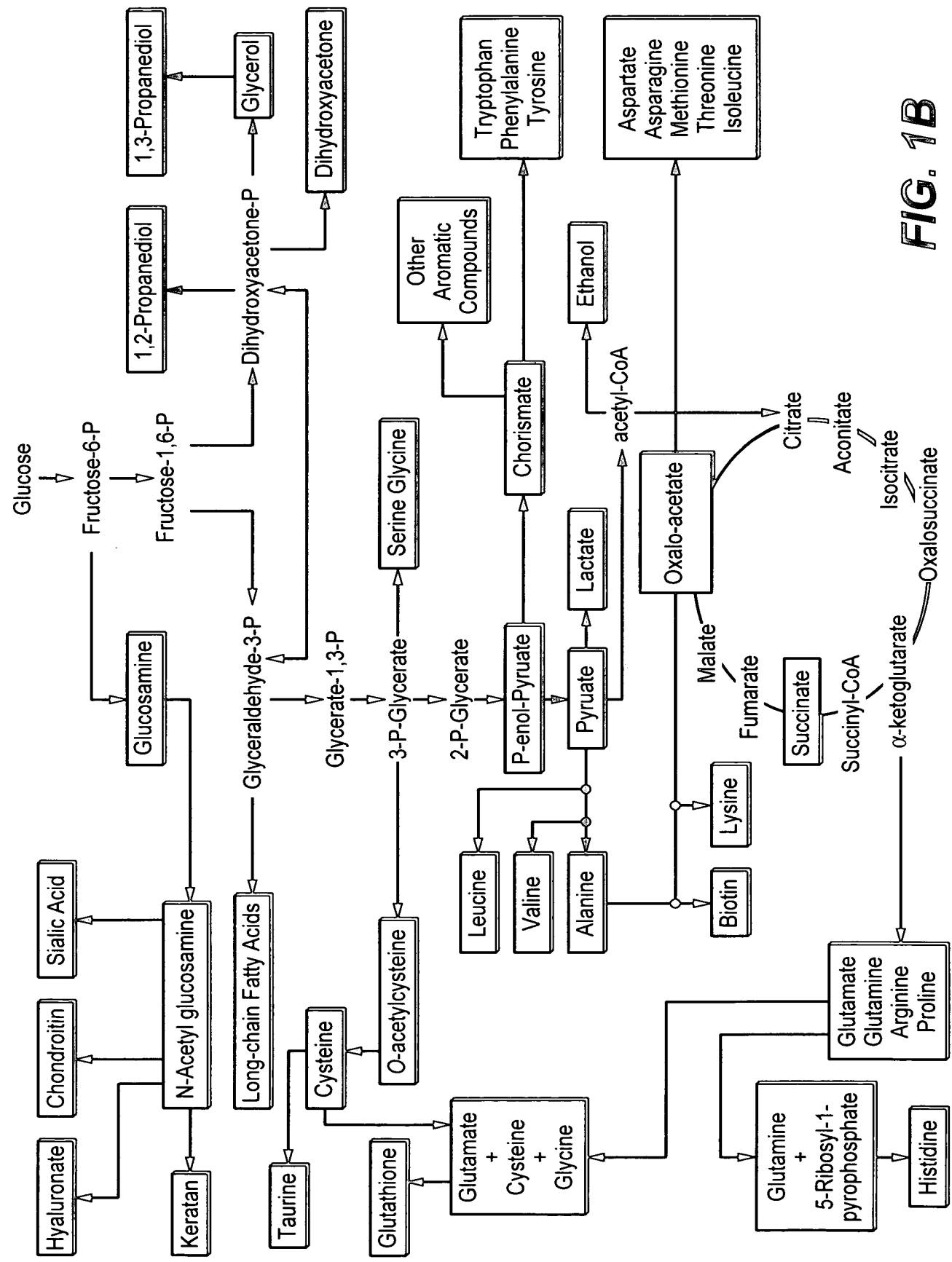


FIG. 1A



TCGGTTTTACAGTTGTTACATTTCTTTTCAGTAAAGTCTGGATGCATATGGCGGCCGC**ATAA**  
**CTTCGTATAGCATACATTATACGAAGTTATCTAGAGTTGCATGCCTGCAGGTCCGAATTTCTG**  
CCATTCATCCGCTTATTATCACTTATTCAGGCGTAGCACCAGGCGTTTAAGGGCACCAATAAC  
TGCCTTAAAAAA**TTACGCCCCGCCCTGCCACTCATCGCAGTACTGTTGTAATTCATTAAGCA**  
**TTCTGCCGACATGGAAGCCATCACAAACGGCATGATGAACCTGAATCGCCAGCGGCATCAGCA**  
**CCTTGTCGCCTTGCGTATAATATTTGCCCATGGTGAAAACGGGGGCGAAGAAGTTGTCCATAT**  
**TGGCCACGTTTAAATCAAACTGGTGAACTCACCCAGGGATTGGCTGAGACGAAAAACATAT**  
**TCTCAATAAACCCCTTTAGGGAAATAGGCCAGGTTTTACCGTAACACGCCACATCTTGCGAAT**  
**ATATGTGTAGAACTGCCGGAAATCGTCGTGGTATTCACTCCAGAGCGATGAAAACGTTTCAG**  
**TTTGCTCATGGAAAACGGTGTAACAAGGGTGAACACTATCCCATATCACCAGCTCACCGTCTT**  
**TCATTGCCATACGGAATTCGGGATGAGCATTATCAGGCGGGCAAGAATGTGAATAAAGGCCG**  
**GATAAACTTGTGCTTATTTTCTTTACGGTCTTTAAAAAGGCCGTAATATCCAGCTGAACGG**  
**TCTGGTTATAGGTACATTGAGCAACTGACTGAAATGCCTCAAAATGTTCTTTACGATGCCATT**  
**GGGATATATCAACGGTGGTATATCCAGTGATTTTTTTCTCCAT**TTTAGCTTCCTTAGCTCCTG  
AAAATCTCGATAACTCAAAAATACGCCCGGTAGTGATCTTATTTTCATTATGGTGAAAGTTGG  
AACCTCTTACGTGCCGATCAACGTCTCATTTTCGCCAAAAGTTGGCCCAGGGCTTCCCGGTAT  
CAACAGGGACACCAGGATTTATTTATTCTGCGAAGTGATCTTCCGTCACAGGTATTTATTCGG  
ACT**CTAGATAACTTCGTATAGCATACATTATACGAAGTTAT**GGATCATGGCTGTGCAGGTCGT  
AAATCACTGCATAATTCGTGTCGCTCAAGGCGCACTCCCGTTCTGGATAATGTTTTTTGCGCC  
GACATCATAACGGTTCTGGCAAATATTCTGAAATGAGCTGTTGACA**ATTAATCATCCGGCTCG**  
**TATAAT**GTGTGGA**ATTGTGAGCGGATAACAATTT**CACACAGGAAACAGACTA**ATTCACAATAA**  
AAAATAACCATATTGGAGGGCAT**CATG**

**FIG. 2**

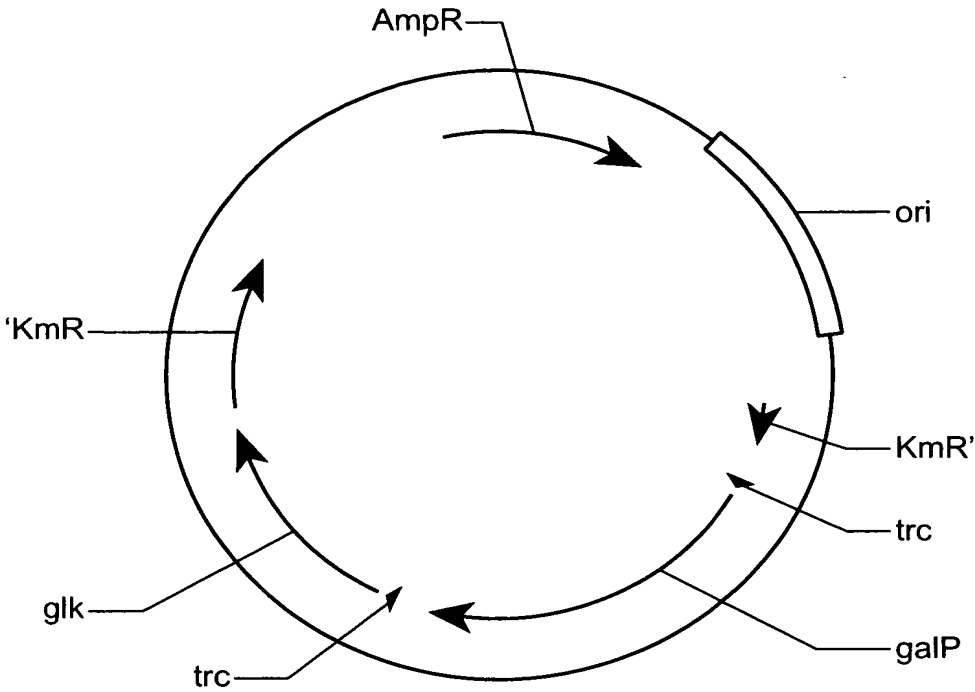
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TTCTTTTTCAGTAAAGTCTGGATGCATATGGCGGCCGCATAACTTCGTATAGCATACATTATACG  
AAGTTATGGATCATGGCTGTGCAGGTCGTAAATCACTGCATAATGGTGTCGCTCAAGGCGCAC  
TCCCGTTCTGGATAATGTTTTTTGCGCCGACATCATAACGGTTCTGGCAAATATTCTGAAATGA  
GCTGTTGACA**ATTAATCATCCGGCTCGTATAATGTGTGGCATTG**

**FIG. 3**

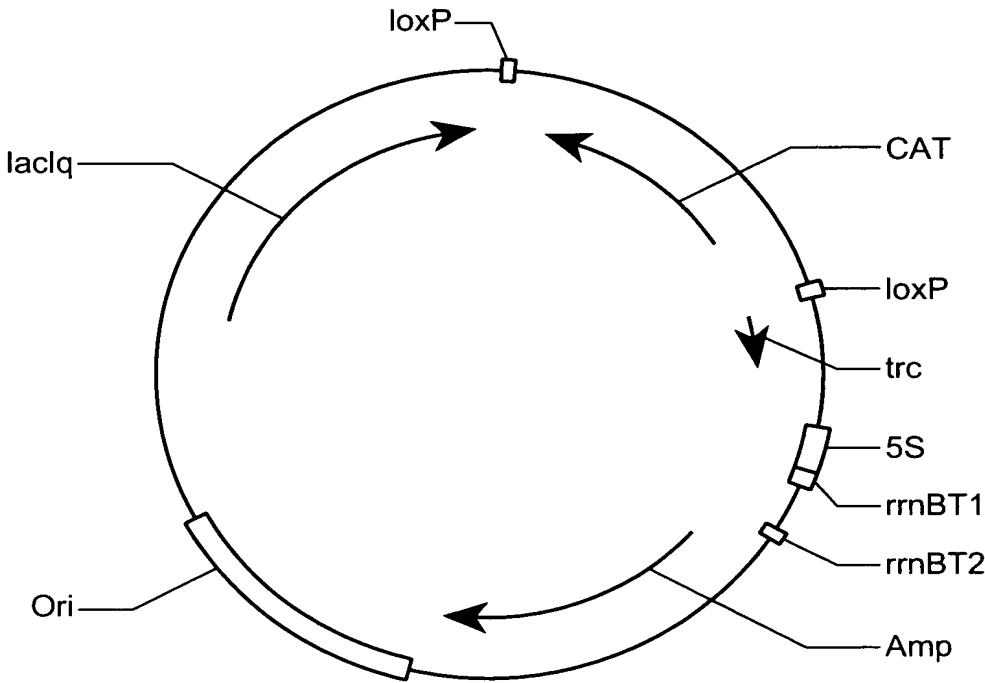
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ACTTAGTTTGCCCAGCTTGCAAAAAGGCATCGCTGCAATTGGATGCATATGGCGGCCGC**ATAA**  
**CTTCGTATAGCATAACATTATACGAAGTTATCTAGAGTTGCATGCCTGCAGGTCCGAATTTCTG**  
CCATTCATCCGCTTATTATCACTTATTCAGGCGTAGCACCAGGCGTTTAAGGGCACCAATAAC  
TGCCTTAAAAAA**TTACGCCCCGCCCTGCCACTCATCGCAGTACTGTTGTAATTCATTAAGCA**  
**TTCTGCCGACATGGAAGCCATCACAAACGGCATGATGAACCTGAATCGCCAGCGGCATCAGCA**  
**CCTTGTCGCCTTGCGTATAATATTTGCCCATGGTGAAAACGGGGGCGAAGAAGTTGTCCATAT**  
**TGGCCACGTTTAAATCAAACTGGTGAACTCACCCAGGGATTGGCTGAGACGAAAAACATAT**  
**TCTCAATAAACCCTTTAGGGAAATAGGCCAGGTTTTACCGTAACACGCCACATCTTGCGAAT**  
**ATATGTGTAGAACTGCCGGAAATCGTCGTGGTATTCACTCCAGAGCGATGAAAACGTTTCAG**  
**TTTGCTCATGGAAAACGGTGTAACAAGGGTGAACACTATCCCATATCACCAGCTCACCGTCTT**  
**TCATTGCCATACGGAATTCGGGATGAGCATTTCATCAGGCGGGCAAGAATGTGAATAAAGGCCG**  
**GATAAACTTGTGCTTATTTTTCTTTACGGTCTTTAAAAAGGCCGTAATATCCAGCTGAACGG**  
**TCTGGTTATAGGTACATTGAGCAACTGACTGAAATGCCTCAAAATGTTCTTTACGATGCCATT**  
**GGGATATATCAACGGTGGTATATCCAGTGATTTTTTTCTCCAT**TTTAGCTTCCTTAGCTCCTG  
AAAATCTCGATAACTCAAAAAATACGCCCCGGTAGTGATCTTATTTTATTATGGTGAAAGTTGG  
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CAACAGGGACACCAGGATTTATTTATTTCTGCGAAGTGATCTTCCGTCACAGGTATTTATTCGG  
ACTC**TAGATAACTTCGTATAGCATAACATTATACGAAGTTAT**GGATCATGGCTGTGCAGGTCGT  
AAATCACTGCATAATTCGTGTCGCTCAAGGCGCACTCCCGTTCTGGATAATGTTTTTTGCGCC  
GACATCATAACGGTTCTGGCAAATATTCTGAAATGAGCTG**CTTGACAATTAATCATCCGGCTC**  
**GTATAAT**GTGTGGAATTGTGAGCGGATAACAATTTACACACAGGAAACAGACGAGAAAGAATTA  
TTTTGACTTTAGCGGAGCAGTTGAAGA**ATG**

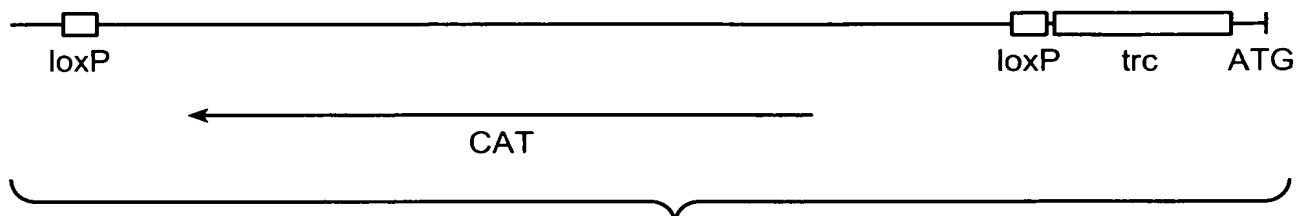
**FIG. 4**



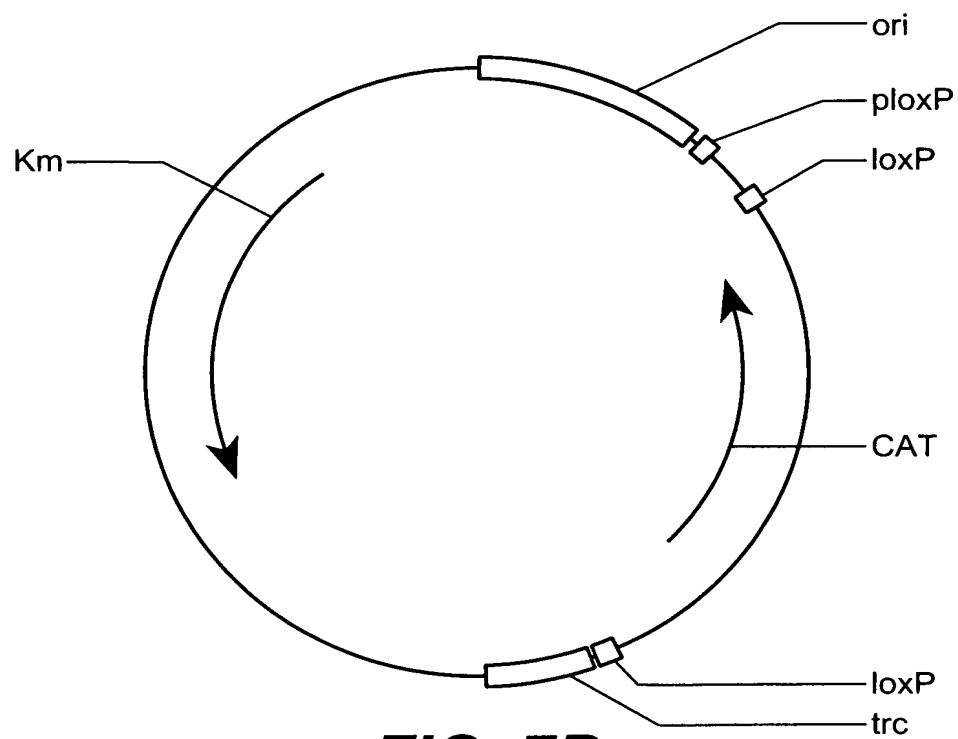
**FIG. 5**



**FIG. 6**



**FIG. 7A**



**FIG. 7B**

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TAGTAAAGCCCTCGCTAGATTTTAATGCGGATGTTGCGATTACTTCGCCAACTATTGCGATAAC  
AAGAAAAAGCCAGCCTTTCATGATATATCTCCCAATTTGTGTAGGGCTTATTATGCACGCTTAA  
AAATAATAAAAGCAGACTTGACCTGATAGTTTGGCTGTGAGCAATTATGTGCTTAGTGCATCTA  
ACGCTTGAGTTAAGCCGCGCCGCGAAGCGGCGTCGGCTTGAACGAATTGTTAGACATTATTTGC  
CGACTACCTTGGTGATCTCGCCTTTCACGTAGTGACAAATTCTTCCAACCTGATCTGCGCGCGA  
GGCCAAGCGATCTTCTTCTTGTCCAAGATAAGCCTGTCTAGCTTCAAGTATGACGGGCTGATAC  
TGGGCCGGCAGGCGCTCCATTGCCAGTCGGCAGCGACATCCTTCGGCGCGATTGTCGGGTTA  
CTGCGCTGTACCAAATGCGGGACAACGTAAGCACTACATTTGCTCATCGCCAGCCCAGTCGGG  
CGGCGAGTTCCATAGCGTTAAGGTTTCATTTAGCGCCTCAAATAGATCCTGTTTCAGGAACCGGA  
TCAAAGAGTTCCCTCCGCCGCTGGACCTACCAAGGCAACGCTATGTTCTCTTGCTTTTGTGTCAGCA  
AGATAGCCAGATCAATGTGATCGTGGCTGGCTCGAAGATACCTGCAAGAATGTCATTGCGCTG  
CCATTTCTCCAAATTGCAGTTCGCGCTTAGCTGGATAACGCCACGGAATGATGTGCTCGTGCACA  
ACAATGGTGACTTCTACAGCGCGGAGAATCTCGCTCTCTCCAGGGGAAGCCGAAGTTTCCAAAA  
GGTCGTTGATCAAAGCTCGCCGCGTTGTTTCATCAAGCCTTACGGTCACCGTAACCAGCAAATC  
AATATCACTGTGTGGCTTCAGGCCGCCATCCACTGCGGAGCCGTACAAATGTACGGCCAGCAAC  
GTCGGTTCGAGATGGCGCTCGATGACGCCAACTACCTCTGATAGTTGAGTCGATACTTCGGCGA  
TCACCGCTTCCCTCATGATGTTTAACTTTGTTTTAGGGCGACTGCCCTGCTGCGTAACATCGTT  
GCTGCTCCATAACATCAAACATCGACCCACGGCGTAACGCGCTTGCTGCTTGATGCCCGAGGC  
ATAGACTGTACCCCAAAAAACAGTCATAACAAGCCATGAAAACCGCCACTGCGCCGTTACCAC  
CGCTGCGTTTCGGTCAAGGTTCTGGACCAGTTGCGTGAGCGCATAACGCTACTTGCATTACAGCTT  
ACGAACCGAACAGGCTTATGTCCACTGGGTTTCGTGCCTTCATCCGTTTCCACGGTGTGCGTCAC  
CCGGCAACCTTGGGCAGCAGCGAAGTCGAGGCATTTCTGTCTTGGCTGGCGAACGAGCGCAAGG  
TTTCGGTCTCCACGCATCGTCAGGCATTGGCGGCCTTGCTGTTCTTCTACGGCAAGGTGCTGTG  
CACGGATCTGCCCTGGCTTCAGGAGATCGGAAGACCTCGGCCGTGCGGGCGCTTGCCGGTGGTG  
CTGACCCCGGATGAAGTGGTTTCGCATCCTCGGTTTTCTGGAAGGCGAGCATCGTTTGTTCGCCC  
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TTTCGATCACGGCACGATCATCGTGCGGGAGGGCAAGGGCTCCAAGGATCGGGCCTTGATGTTA  
CCCGAGAGCTTGGCACCCAGCCTGCGCGAGCAGGGGAATTAATTCCCACGGGTTTTGCTGCCCG  
CAAACGGGCTGTTCTGGTGTGCTAGTTTGTATATCAGAATCGCAGATCCGGCTTCAGCCGGTTT  
GCCGGCTGAAAGCGCTATTTCTTCCAGAATTGCCATGATTTTTTCCCACGGGAGGCGTCACTG  
GCTCCCGTGTGTCGGCAGCTTTGATTGATAAGCAGCATCGCCTGTTTCAGGCTGTCTATGTG  
TGACTGTTGAGCTGTAACAAGTTGTCTCAGGTGTTCAATTTTCATGTTCTAGTTGCTTTGTTTTA  
CTGGTTTTACCTGTTCTATTAGGTGTTACATGCTGTTTCATCTGTTACATTGTGATCTGTTTCAT  
GGTGAACAGCTTTGAATGCACCAAAAACCTCGTAAAAGCTCTGATGTATCTATCTTTTTTACACC  
GTTTTTCATCTGTGCATATGGACAGTTTTTCCCTTTGATATGTAACGGTGAACAGTTGTTCTACTT  
TTGTTTTGTTAGTCTTGATGCTTCACTGATAGATACAAGAGCCATAAGAACCTCAGATCCTTCCG  
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TGAGATCATACTTACTTTGCATGTCACTCAAAAATTTTGCCTCAAACTGGTGAGCTGAATTTT  
TGCAGTTAAAGCATCGTGTAGTGTTTTTCTTAGTCCGTTATGTAGGTAGGAATCTGATGTAATG  
GTTGTTGGTATTTTTGTCACCATTCATTTTTATCTGGTTGTTCTCAAGTTCGGTTACGAGATCCA  
TTTGTCTATCTAGTTCAACTTGGAAAATCAACGTATCAGTCGGGCGGCCTCGCTTATCAACCAC  
CAATTTTCATATTGCTGTAAGTGTTTAAATCTTTACTTATTGGTTTTCAAACCCATTGGTTAAGC  
CTTTTAAACTCATGGTAGTTATTTTTCAAGCATTAACATGAACTTAAATTCATCAAGGCTAATCT  
CTATATTTGCCTTGTGAGTTTTCTTTTGTGTTAGTTCTTTTAATAACCACTCATAAATCCTCAT  
AGAGTATTTGTTTTCAAAGACTTAACATGTTCCAGATTATATTTTATGAATTTTTTTAACTGG  
AAAAGATAAGGCAATATCTCTTCACTAAAAACTAATTCTAATTTTTTCGCTTGAGAACTTGGCAT

**FIG. 8A**

AGTTTGTCCACTGGAAAATCTCAAAGCCTTTAACCAGGATTCCTGATTTCCACAGTTCTCGT  
CATCAGCTCTCTGGTTGCTTTAGCTAATACACCATAAGCATTTTCCCTACTGATGTTTCATCATC  
TGAGCGTATTGGTTATAAGTGAACGATACCGTCCGTTCTTTCCCTTGTAGGGTTTTCAATCGTGG  
GGTTGAGTAGTGCCACACAGCATAAAATTAGCTTGGTTTCATGCTCCGTTAAGTCATAGCGACT  
AATCGCTAGTTCATTTGCTTTGAAAACAACATAATTCAGACATACATCTCAATTGGTCTAGGTGA  
TTTTAATCACTATACCAATTGAGATGGGCTAGTCAATGATAATTACTAGTCCTTTTCCCTTTGAG  
TTGTGGGTATCTGTAAATTCTGCTAGACCTTTGCTGGAAAACCTTGTAATTTCTGCTAGACCCCTC  
TGTAATTTCCGCTAGACCTTTGTGTGTTTTTTTTTGTATTATATCAAGTGGTTATAATTTATAGA  
ATAAAGAAAGAATAAAAAAGATAAAAAGAATAGATCCCAGCCCTGTGTATAACTCACTACTTT  
AGTCAGTTCGCGAGTATTACAAAAGGATGTCGCAAACGCTGTTTGCTCCTCTACAAAACAGACC  
TTAAAACCCTAAAGGCTTAAGTAGCACCCCTCGCAAGCTCGGGCAAATCGCTGAATATTCCTTTT  
GTCTCCGACCATCAGGCACCTGAGTCGCTGTCTTTTTTCGTGACATTTCAGTTCGCTGCGCTCACG  
GCTCTGGCAGTGAATGGGGGTAAATGGCACTACAGGCGCCTTTTATGGATTTCATGCAAGGAAAC  
TACCCATAATACAAGAAAAGCCCGTCACGGGCTTCTCAGGGCGTTTTATGGCGGGTCTGCTATG  
TGGTGCTATCTGACTTTTTTGCTGTTTCAGCAGTTCCTGCCCTCTGATTTTCCAGTCTGACCACTT  
CGGATTATCCCGTGACAGGTCAATTCAGACTGGCTAATGCACCCAGTAAGGCAGCGGTATCATCA  
ACAGGCTTACCCGTCTTACTGTGCGGAATTCATTTAAATAGTCAAAGCCTCCGACCGGAGGCT  
TTTGACTGCTAGGCGATCTGTGCTGTTTGCCACGGTATGCAGCACCAGCGCGAGATTATGGGCT  
CGCACGCTCGACTGTGCGACGGGGGCACTGGAACGAGAAGTCAGGCGAGCCGTCACGCCCTTGA  
CAATGCCACATCCTGAGCAAATAATTCAACCACTAAACAAATCAACCGCGTTTTCCCGGAGGTAA  
CCAAGCTTGCGGGAGAGAATGATGAACAAGAGCCAACAAGTTCAGACAATCACCTGGCCGCCG  
CCCAGCAAATGGCGGCGGCGGTGGAAAAAAAGCCACTGAGATCAACGTGGCGGTGGTGTTTTT  
CGTAGTTGACCGCGGAGGCAACACGCTGCTTATCCAGCGGATGGACGAGGCCTTCGTCTCCAGC  
TGCGATATTTCCCTGAATAAAGCCTGGAGCGCCTGCAGCCTGAAGCAAGGTACCCATGAAATTA  
CGTCAGCGGTCCAGCCAGGACAATCTCTGTACGGTCTGCAGCTAACCAACCAACAGCGAATTAT  
TATTTTTTGGCGGCGGCCCTGCCAGTTATTTTTTAATGAGCAGGTAATTGGCGCCGTCGGCGTTAGC  
GGCGGTACGGTCGAGCAGGATCAATTATTAGCCAGTGCGCCCTGGATTGTTTTTCCGCATTAT  
AACCTGAAGCGAGAAGGTATATTATGAGCTATCGTATGTTCCGCCAGGCATTCTGAGTGTTAAC  
GAGGGGACCGTCATGTGCTTTTACCGCCAGGCGTACGCCTGTTTTACGATCCGCGCGGGCACC  
ATGCCGGCGCCATCAATGAGCTGTGCTGGGGGCTGGAGGAGCAGGGGGTCCCCTGCCAGACCAT  
AACCTATGACGGAGGCGGTGACGCCGCTGCGCTGGGCGCCCTGGCGGCCAGAAGCTCGCCCCCTG  
CGGGTGGGTATCGGGCTCAGCGCGTCCGGCGAGATAGCCCTCACTCATGCCAGCTGCCGGCGG  
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CGCCGGGCAGCTGGTTAAAGTCCTGCCGTTAAGTGAGAGAACTGAATGTATCGTATCTATACC  
CGCACCGGGGATAAAGGCACCACCGCCCTGTACGGCGGCAGCCGCATCGAGAAAGACCATATTC  
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CCGCGACGCCGGGCTGCGGGAAAGCCTGCACCATATTCAGCAGACGCTGTTTCGTGCTGGGGGCT  
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CCGCCCTGGAGCGGCTTATCGACCGCAATATGGCCGAGAGCGGCCCGTTAAACAGTTTCGTGAT  
CCCGGGGAGGAATCTCGCCTCTGCCAGCTGCACGTGGCGCGCACCCAGTCCCGTCGGCTCGAA  
CGCCTGCTGACGGCCATGGACCGCGCGCATCCGCTGCGCGACGCGCTCAAACGCTACAGCAATC  
GCCTGTGCGGATGCCCTGTTCTCCATGGCGCGAATCGAAGAGACTAGGCCTGATGCTTGCGCTTG  
AACTGGCCTAGCAAACACAGAAAAAGCCCGCACCTGACAGTGCGGGGCTTTTTTTTTTCCCTAGGC  
GATCTGTGCTGTTTGCCACGGTATGCAGCACCAGCGCGAGATTATGGGCTCGCACGCTCGACTG  
TCGGACGGGGGCACTGGAACGAGAAGTCAGGCGAGCCGTCACGCCCTTGACAATGCCACATCCT  
GAGCAAATAATTCAACCACTAAACAAATCAACCGCGTTTCCCGGAGGTAACCAAGCTTCACCTT

**FIG. 8B**



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TTGAGCCGATGAACAATGAAAAGATCAAAACGATTTGCAGTACTGGCCCAGCGCCCCGTCAATC  
AGGACGGGCTGATTGGCGAGTGGCCTGAAGAGGGGCTGATCGCCATGGACAGCCCCTTTGACCC  
GGTCTCTTCAGTAAAAGTGGACAACGGTCTGATCGTCGAACTGGACGGCAAACGCCGGGACCAG  
TTTGACATGATCGACCGATTTATCGCCGATTACGCGATCAACGTTGAGCGCACAGAGCAGGCAA  
TGCGCCTGGAGGCGGTGGAAATAGCCCGTATGCTGGTGGATATTACGTCAGCCGGGAGGAGAT  
CATTGCCATCACTACCGCCATCACGCCGGCCAAAGCGGTTCGAGGTGATGGCGCAGATGAACGTG  
GTGGAGATGATGATGGCGCTGCAGAAGATGCGTGCCCGCCGGACCCCCTCCAACAGTGCCACG  
TCACCAATCTCAAAGATAATCCGGTGCAGATTGCCGCTGACGCCGCCGAGGCCGGGATCCGCGG  
CTTCTCAGAACAGGAGACCACGGTCGGTATCGCGCGCTACGCGCCGTTTAACGCCCTGGCGCTG  
TTGGTCGGTTTCGCAGTGCGGCCGCCCGGCGTGTGACGCAGTGCTCGGTGGAAGAGGCCACCG  
AGCTGGAGCTGGGCATGCGTGGCTTAACCAGCTACGCCGAGACGGTGTGCGTCTACGGCACCGA  
AGCGGTATTTACCGACGGCGATGATACGCCGTGGTCAAAGGCGTTCTCGCCTCGGCCTACGCC  
TCCCGCGGGTTGAAAATGCGCTACACCTCCGGCACCGGATCCGAAGCGCTGATGGGCTATTTCG  
AGAGCAAGTCGATGCTCTACCTCGAATCGCGCTGCATCTTCATTACTAAAGGCGCCGGGGTTCA  
GGGACTGCAAAACGGCGCGGTGAGCTGTATCGGCATGACCGGCGCTGTGCCGTCGGGCATTTCG  
GCGGTGCTGGCGGAAAACCTGATCGCCTCTATGCTCGACCTCGAAGTGGCGTCCGCCAACGACC  
AGACTTTCTCCCACTCGGATATTCGCCCGACCGCGCGCACCTTGATGCAGATGCTGCCGGGCAC  
CGACTTTATTTTCTCCGGCTACAGCGCGGTGCCGAACCTACGACAACATGTTCCGCCGGCTCGAAC  
TTCGATGCGGAAGATTTTGATGATTACAACATCCTGCAGCGTGACCTGATGGTTGACGGCGGCC  
TGCGTCCGGTGACCGAGGCGGAAACCATTGCCATTTCGCCAGAAAGCGGCGCGGGCGATCCAGGC  
GGTTTTCCGCGAGCTGGGGCTGCCGCCAATCGCCGACGAGGAGGTGGAGGCCGCCACCTACGCG  
CACGGCAGCAACGAGATGCCGCCGCGTAACGTGGTGGAGGATCTGAGTGCGGTGGAAGAGATGA  
TGAAGCGCAACATCACCGGCCCTCGATATTGTGCGCGCGCTGAGCCGCAGCGGCTTTGAGGATAT  
CGCCAGCAATATTTCTCAATATGCTGCGCCAGCGGGTCACCGGCGATTACCTGCAGACCTCGGCC  
ATTCTCGATCGGCAGTTCGAGGTGGTGAAGTGCAGTCAACGACATCAATGACTATCAGGGGCCGG  
GCACCGGCTATCGCATCTCTGCCGAACGCTGGGCGGAGATCAAAAATATTCGGGGCGTGTTCA  
GCCCCGACACCATTGAATAAGGCGGTATTCCTGTGCAACAGACAACCCAAATTCAGCCCTCTTTT  
ACCTTGAAAACCCGCGAGGGCGGGGTAGCTTCTGCCGATGAACGCGCCGATGAAGTGGTGATCG  
GCGTCGGCCCTGCCTTCGATAAACACCAGCATCACACTCTGATCGATATGCCCCATGGCGCGAT  
CCTCAAAGAGCTGATTGCCGGGGTGGAAGAAGAGGGGCTTCACGCCCGGGTGGTGCAGATTCTG  
CGCACGTCCGACGTCTCCTTTATGGCCTGGGATGCGGCCAACCTGAGCGGCTCGGGGATCGGCA  
TCGGTATCCAGTCGAAGGGGACCACGGTCATCCATCAGCGCGATCTGCTGCCGCTCAGCAACCT  
GGAGCTGTTCTCCAGGCGCCGCTGCTGACGCTGGAGACCTACCGGCAGATTGGCAAAAACGCT  
GCGCGCTATGCGCGCAAAGAGTCACCTTCGCCGGTGCCGGTGGTGAACGATCAGATGGTGCGGC  
CGAAATTTATGGCCAAAGCCGCGCTATTTTCATATCAAAGAGACCAAACATGTGGTGCAGGACGC  
CGAGCCCGTCACCCTGCACATCGACTTAGTAAGGGAGTGACCATGAGCGAGAAAACCATGCGCG  
TGCAGGATTATCCGTTAGCCACCCGCTGCCCGGAGCATATCCTGACGCCTACCGGCAAACCAT  
GACCGATATTACCCTCGAGAAGGTGCTCTCTGGCGAGGTGGGCCCCGAGGATGTGCGGATCTCC  
CGCCAGACCCTTGAGTACCAGGCGCAGATTGCCGAGCAGATGCAGCGCCATGCGGTGGCGCGCA  
ATTTCCGCCGCGCGGGCGGAGCTTATCGCCATTTCCTGACGAGCGCATTTCTGGCTATCTATAACGC  
GCTGCGCCCGTTCCGCTCCTCGCAGGCGGAGCTGCTGGCGATCGCCGACGAGCTGGAGCACACC  
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AGCTGCGTAAAGGAAGCTAAGCGGAGGTCAGCATGCCGTTAATAGCCGGGATTGATATCGGCAA  
CGCCACCACCGAGGTGGCGCTGGCGTCCGACTACCCGCAGGCGAGGGCGTTTGTGTCAGCGGG  
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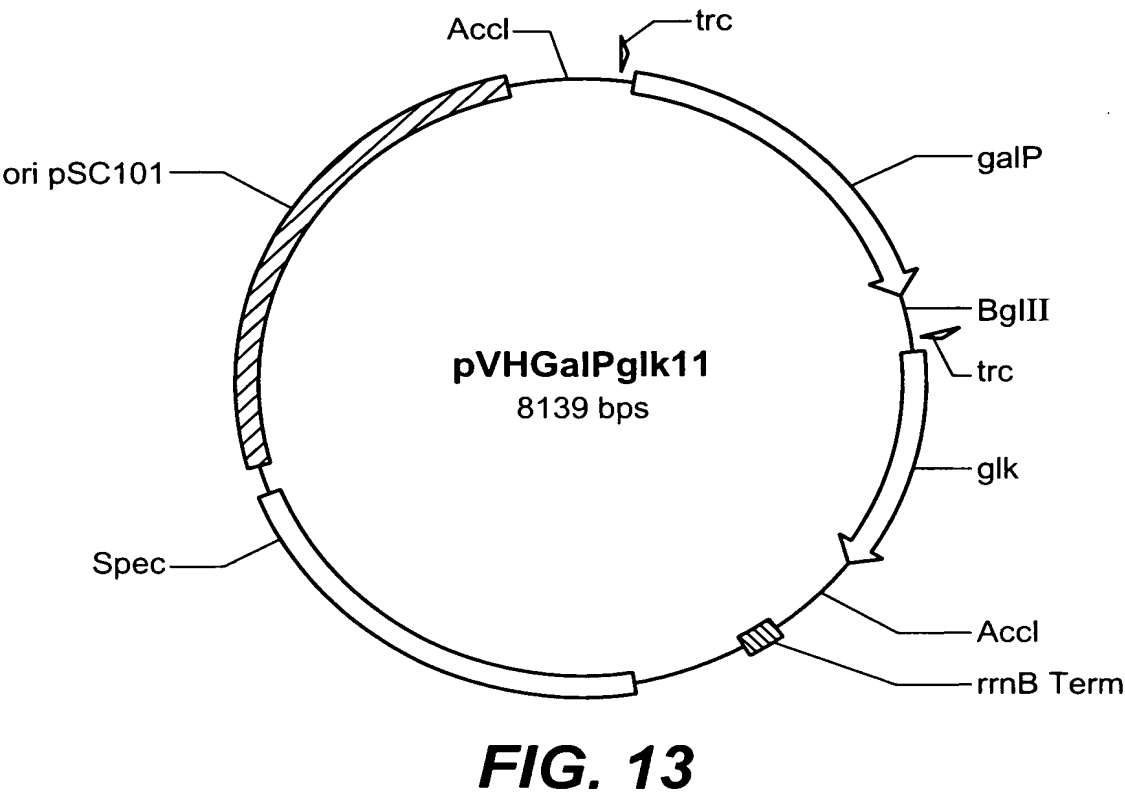
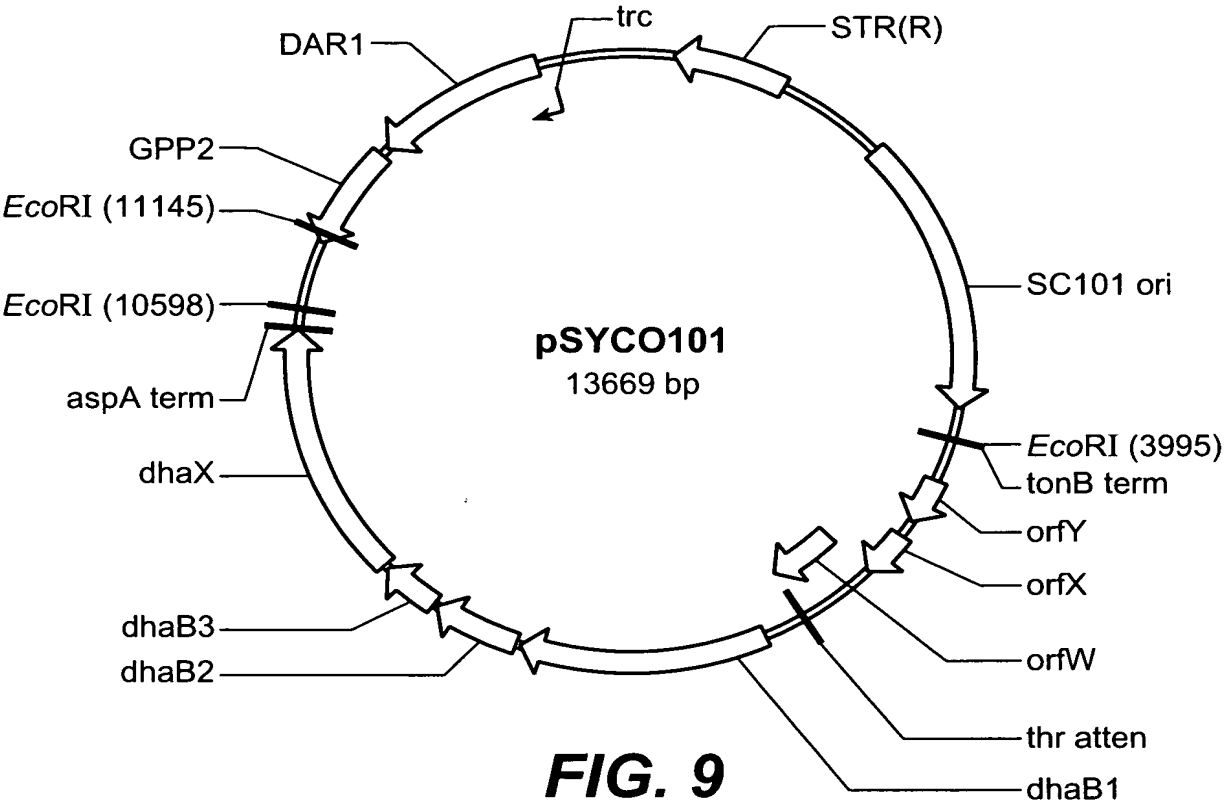
**FIG. 8C**

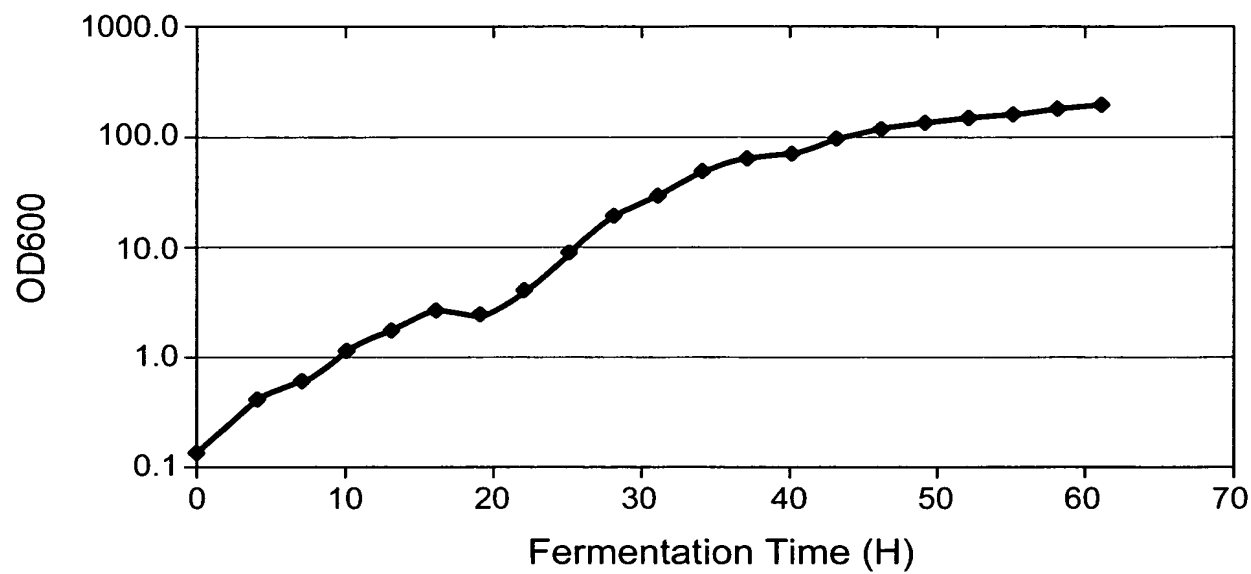
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TCGGGCGGCTGGCGACGCTGCCGGCGGCGCAGTATGCCGAGGGGTGGATCGTACTGATTGACGA  
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CATTAGCGGCGAAAAGCGCCGCGGAGAGGCCGATGTGCGCGAGGGCGCGGAAGCCATCATGCAG  
GCGATGAGCGCTGCGCTCCGGTACGCGACATCCGCGGCGAACCGGGCACCCACGCCGGCGGCA  
TGCTTGAGCGGGTGGCAAGGTAATGGCGTCCCTGACCGGCCATGAGATGAGCGCGATATACAT  
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GGCGGTTCCATTCGCGATATCGCCTTTGTGGTGCTGGTGGGCGGCTCATCGCTGGACTTTGAGA  
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CAACAGATAAAACGAAAGGCCAGTCTTTCGACTGAGCCTTTCGTTTATTTGATGCCTGGCAG  
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TCGGCATGGGGTCAGGTGGGACCACCGCGCTACTGCCGCCAGGCAAATTCTGTTTTATCAGACC  
GCTTCTGCGTTCTGATTTAATCTGTATCAGGCTGAAAATCTTCTCTCATCCGCCAAAACAGCCA  
AGCTTGCATGCCTGCAGCCCGGGTTACCATTTCAACAGATCGTCCCTTAGCATATAAGTAGTCGT  
CAAAAATGAATTCAACTTCGTCTGTTTCGGCATTTGTAGCCGCCAACTCTGATGGATTCTGTGGTT  
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ATGATCTTACAACCGGCGGCTTTTCCGGCGGCAATACCTGCTGGAGCGTCTTCAAATACTACTA  
CCTTAGATTTGGAAGGGTCTTGCTCATTGATCGGATATCCTAAGCCATTCTGCCCCTTCAGATA  
TGGTTCTGGATGAGGCTTACCCTGTTTGACATCATTAGCGGTAATGAAGTACTTTGGTCTCCTG  
ATTCCCAGATGCTCGAACCATTTTTGTGCCATATCACGGGTACCGGAAGTTGCCACAGCCCAT  
TCTCTTTTGGTAGAGCGTTCAAAGCGTTGCACAGCTTAACTGCACCTGGGACTTCAATGGATTT  
TTCACCGTACTTGACCGGAATTTTCAGCTTCTAATTTGTAAACATACTCTTCATTGGCAAAGTCT  
GGAGCGAACTTAGCAATGGCATCAAACGTTCTCCAACCATGCGAGACTTGGATAACGTGTTTCAG  
CATCGAAATAAGGTTTGTCTTACCGAAATCCCTCCAGAATGCAGCAATGGCTGGTTGAGAGAT

**FIG. 8D**

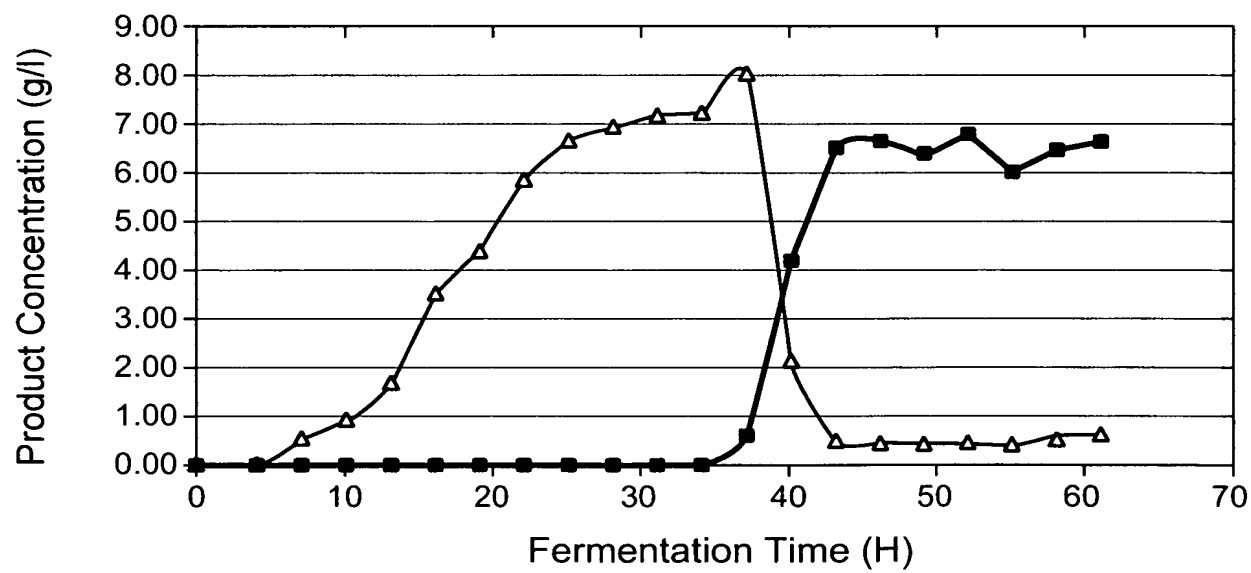
GATAATGGTACCGTCGACGTCGAACAAAGCGGCGTTAACTTTCAAAGATAGAGGTTTAGTAGTC  
AATCCCATAAATCTAGTCTGTTTCCCTGGATCCAATAAATCTAATCTTCATGTAGATCTAATTCT  
TCAATCATGTCCGGCAGGTTCTTCATTGGGTAGTTGTTGTAAACGATTTGGTATACGGCTTCAA  
ATAATGGGAAGTCTTCGACAGAGCCACATGTTTCCAACCATTCGTGAACTTCTTTGCAGGTAAT  
TAAACCTTGAGCGGATTGGCCATTCAACAACCTCCTTTTCACATTCCCAGGCGTCCTTACCAGAA  
GTAGCCATTAGCCTAGCAACCTTGACGTTTCTACCACCAGCGCAGGTGGTGATCAAATCAGCAA  
CACCAGCAGACTCTTGGTAGTATGTTTCTTCTCTAGATTCTGGGAAAAACATTTGACCGAATCT  
GATGATCTCACCCAAACCGACTCTTTGGATGGCAGCAGAAGCGTTGTTACCCCAGCCTAGACCT  
TCGACGAAACCACAACCTAAGGCAACAACGTTCTTCAAAGCACCACAGATGGAGATACCAGCAA  
CATCTTCGATGACACTAACGTGGAAGTAAGGTCTGTGGAACAAGGCCTTTAGAACCTTATGGTC  
GACGTCCTTGCCCTCGCCTCTGAAATCCTTTGGAATGTGGTAAGCAACTGTTGTTTCAGACCAG  
TGTTCTTGAGCGACTTCGGTGGCAATGTTAGCACCAGATAGAGCACCACATTGAATACCTAGTT  
CCTCAGTGATGTAAGAGGATAGCAATTGGACACCTTTAGCACCAACTTCAAACCCCTTTAGACA  
GGAGATAGCTCTGACGTGTGAATCAACATGACCTTTCAATTGGCTACAGATACGGGGCAAAAAT  
TGATGTGGAATGTTGAAAACGATGATGTCGACATCCTTGACTGAATCAATCAAGTCTGGATTAG  
CAACCAAATTGTCGGGTAGAGTGATGCCAGGCAAGTATTTACGTTTTGATGTCTAGTATTTAT  
GATTTCAGTCAATTTTTTCACCATTGATCTCTTCTTCGAACACCCACATTTGTACTATTGGAGCG  
AAAACCTTCTGGGTATCCCTTACAATTTTCGGCAACCACCTTGGAATAGTAGTACCCAGTTAC  
CAGATCCAATCACAGTAACCTTGAAAGGCTTTTCGGCAGCCTTCAAAGAAACAGAAGAGGAACT  
TCTCTTTCTACCAGCATTCAGTGGCCGGAAGTTAAGTTAATCTATCAGCAGCAGCAGCCATG  
GAATTGTCCTCCTTACTAGTCATGGTCTGTTTTCCTGTGTGAAATTGTTATCCGCTCACAAATCC  
ACACATTATACGAGCCGGATGATTAATTGTCAACAGCTCATTTCAGAATATTTGCCAGAACCGT  
TATGATGTCGGCGCAAAAAACATTATCCAGAACGGGAGTGCGCCTTGAGCGACACGAATTATGC  
AGTGATTTACGACCTGCACAGCCATACCACAGCTTCCGATGGCTGCCTGACGCCAGAAGCATTG  
GTGCACGCTAGCCAGTACATTTAAATGGTACCCTCTAGTCAAGGCCTTAAGTGAGTTCGTATTAC  
GGACTGGCCGTCGTTTTACAACGTCGTGACTGGGAAAACCCTGGCGTTACCCAACCTTAATCGCC  
TTGCAGCACATCCCCCTTTTCGCCAGCTGGCGTAATAGCGAAGAGGCCCGCACCGATCGCCCTTC  
CCAACAGTTGCGCAGCCTGAATGGCGAATGGCGCCTGATGCGGTATTTTCTCCTTACGCATCTG  
TGCGGTATTTACACCCGCATATGGTGCACCTCTCAGTACAATCTGCTCTGATGCCGCATAGTTAA  
GCCAGCCCCGACACCCGCCAACACCCGCTGACGAGCT

**FIG. 8E**

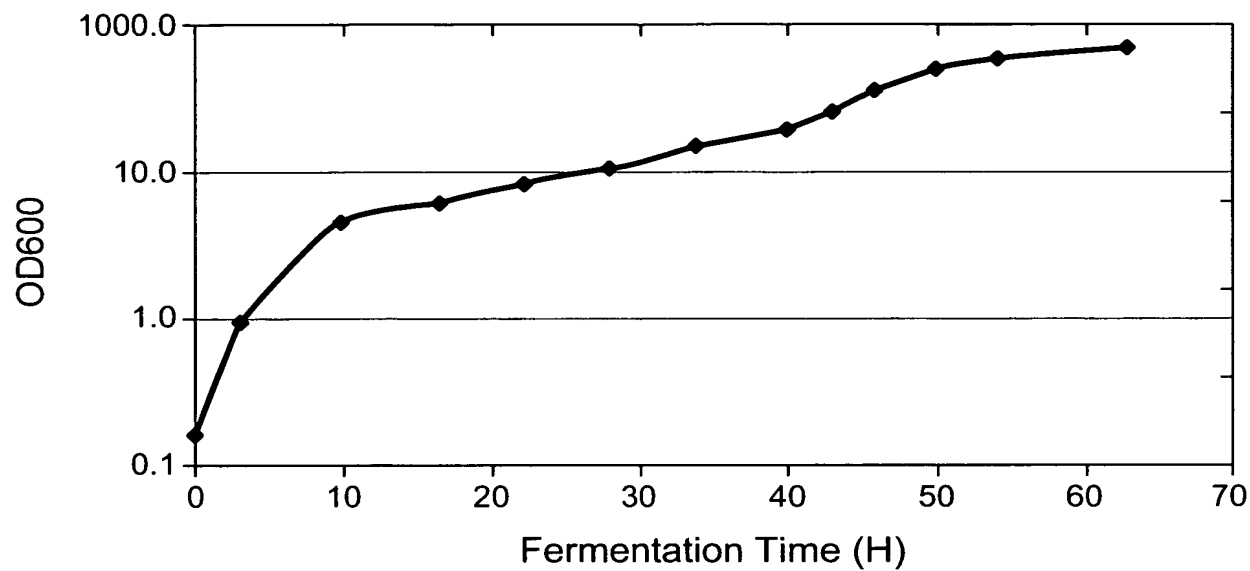




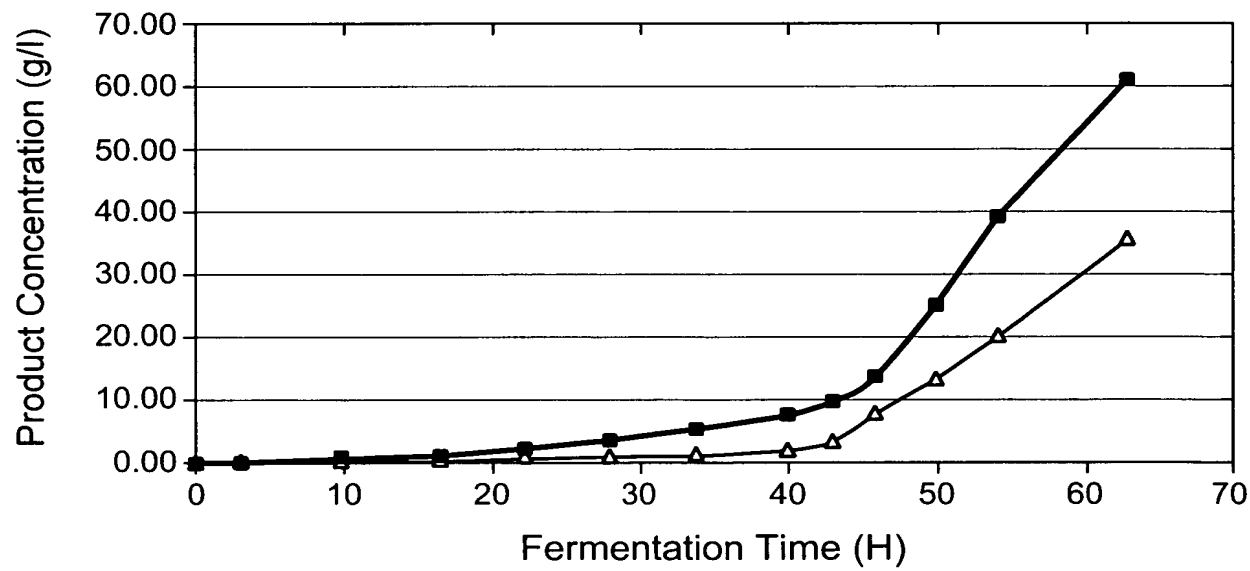
**FIG. 10A**



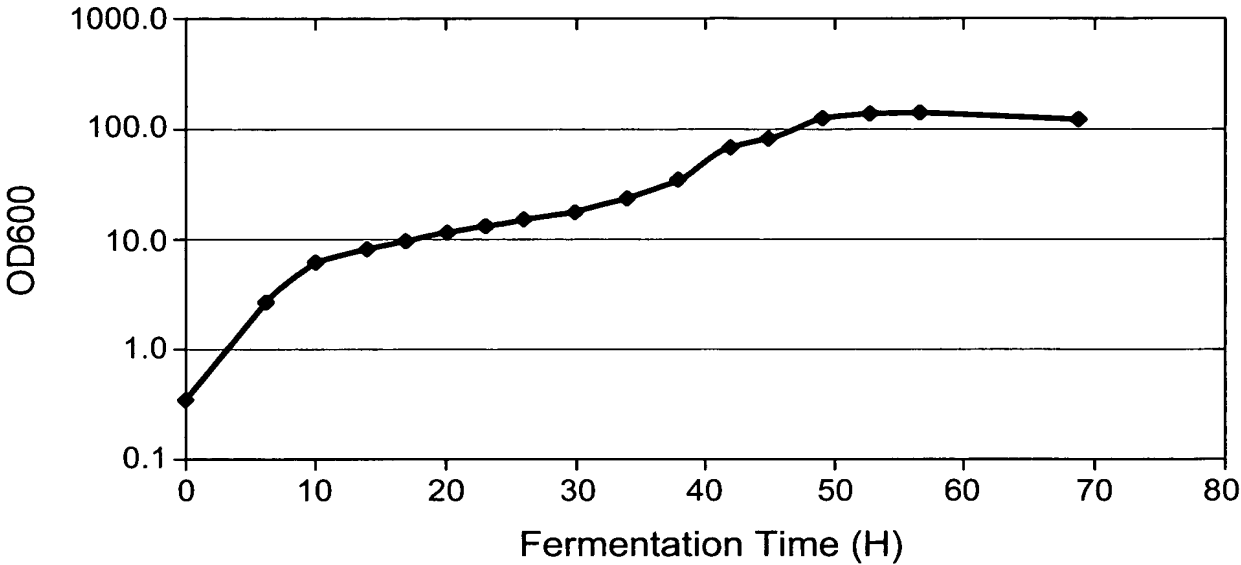
**FIG. 10B**



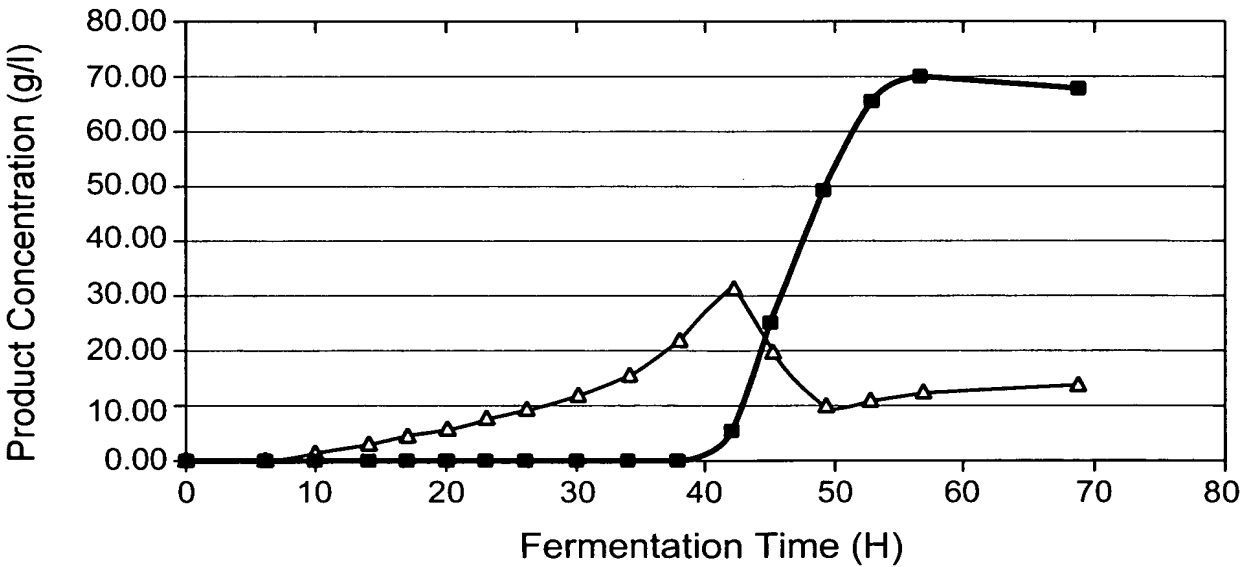
**FIG. 11A**



**FIG. 11B**



**FIG. 12A**



**FIG. 12B**

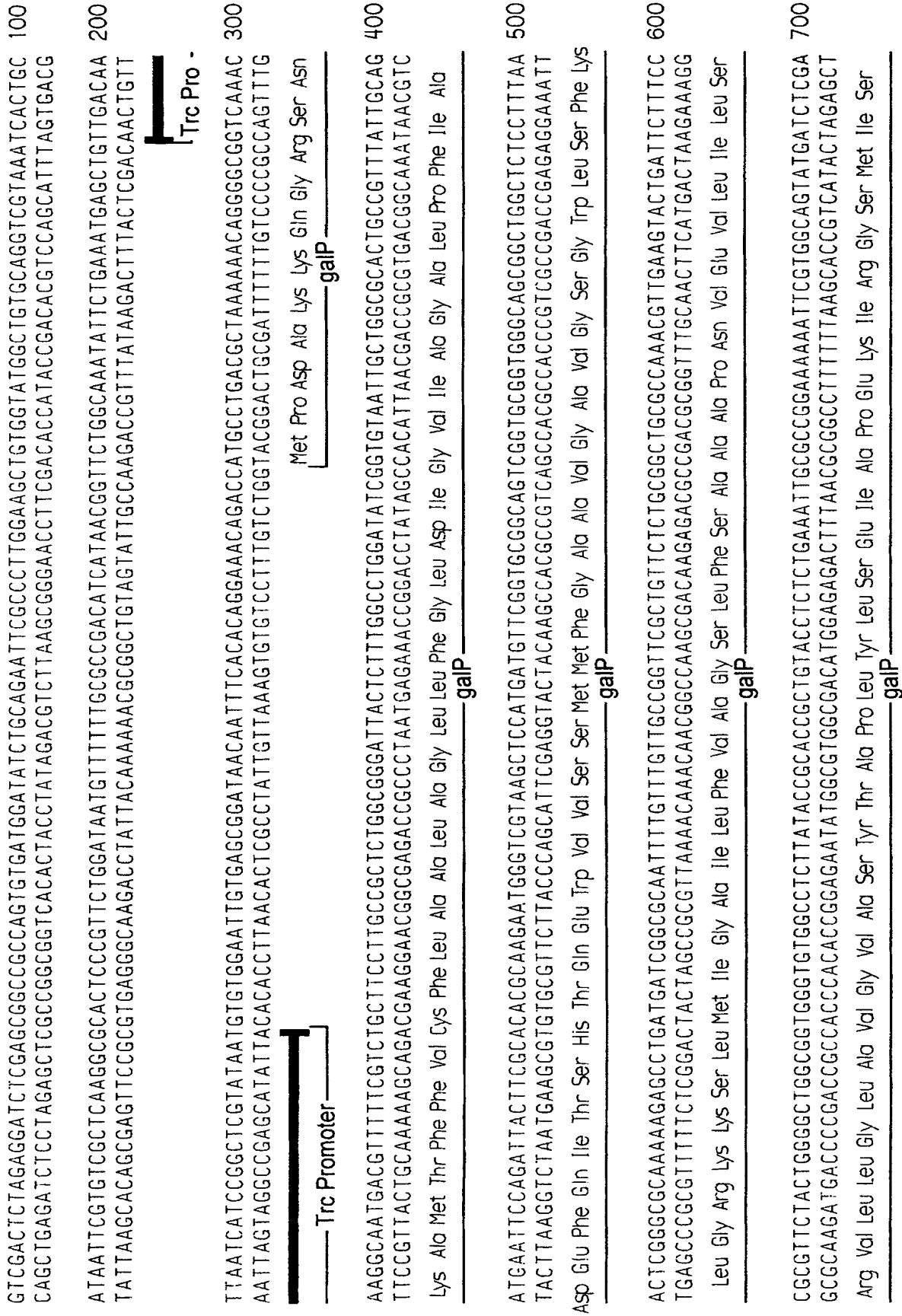


FIG. 14A



TGTAATCAGTTGATGATCAGTACGGGATCCICGGTGCYTATCTTCTGATACCGCCCTTCAGCTACACCGGIGCAIGGCGCTGGATGCTGGGTGTGATTAT 800  
ACATAGTCAACTACTAGTATAGCCCTAGGAGCCACGAATAGAAAGACTATGGCGGAAGTGAITGTGGCCACGTACCGCGACCTACGACCCACACTAATA  
Met Tyr Gln Leu Met Ile Thr Ile Gly Ile Leu Gly Ala Tyr Leu Ser Asp Thr Ala Phe Ser Tyr Thr Gly Ala Trp Arg Trp Met Leu Gly Val Ile Ile  
-----galP-----

CATCCCGGCAATTTTIGCTGCTGATTTGGTGTCTTCTTCCAGACAGCCACCGTGTGGTTTGGCGCCAAACGCGTITTTGTGATGCCGAACGCGTGTG 900  
GTAGGGCCGTTAAACGACGACTAACCACAGAGAAGGACGGTCTGTGCGGTGCAACCAACGCGGGTITGCGGCCAAACAACTACGGCTTGGCGACGAC  
Ile Pro Ala Ile Leu Leu Ile Gly Val Phe Phe Leu Pro Asp Ser Pro Arg Trp Phe Ala Ala Lys Arg Arg Phe Val Asp Ala Glu Arg Val Leu  
-----galP-----

CTAGCCCTGCTGACACCGCGGGAAGCGAAACGGAACCTGGATGAAATCCGTGAAAGTTTGCAGGTTAAACAGAGTGGCTGGGCGCTGTTTAAAGAGA 1000  
GATCGGACCGCACTGTGGTGGCGCTTCGCTTGGCTTACCTACTTTAGGCACCTTCAACACGTCCAAATTTGCTCACCAGCCCGGACAAAATTTCTCT  
Leu Arg Leu Arg Asp Thr Ser Ala Glu Ala Lys Arg Glu Leu Asp Glu Ile Arg Glu Ser Leu Gln Val Lys Gln Ser Gly Trp Ala Leu Phe Lys Glu  
-----galP-----

ACAGCAACTTCCGCGCGGGTGTCTTCCCTGGGTACTGTTCAGGTAATGCAGCAATTCACCGGGATGAACGTCATCATGTATATTACGCGCCGAAAAATCTT 1100  
TGTCTGTGAAGCGCGCGCCACAGGAACCGCATGACAACGTCCTATTACGTCTGTTAAGTGGCCCTACTTGCAGTAGTACATAATATGCGGGCTTTTAGAA  
Asn Ser Asn Phe Arg Ala Val Phe Leu Gly Val Leu Leu Gln Val Met Gln Gln Phe Thr Gly Met Asn Val Ile Met Tyr Ala Pro Lys Ile Phe  
-----galP-----

CGAACTGGCGGTTATACCAACACTACCGAGCAAAATGTGGGGACCGTGAATGTGCGCTGACCAACGTACTTGCCACCTTTATCGCAATCGGCCTTGT 1200  
GCTTGACCGCCCAATAIGTTGTGATGGCTCGTTACACCCCTTGGCATAACAGCCGACTGGTTGCATGAACGGTGGAAATAGCGTTAGCCGGGAACAA  
Glu Leu Ala Gly Tyr Thr Asn Thr Thr Glu Gln Met Trp Gly Thr Val Ile Val Gly Leu Thr Asn Val Leu Ala Thr Phe Ile Ala Ile Gly Leu Val  
-----galP-----

GACCGCTGGGGACGTAAACCAACGCTAACGCTGGGCTTCCTGGTGAATGGCTGGCATGGCGGTACTCGGTACAATGATGCATATCGGTATTCACCTCTC 1300  
CTGGCGACCCCTGCATTTGGTTGCGATTGCGACCCGGAAGGACCACTACCGACGACCGTACCCGATGAGCCATGTTACTACGTATAGCCATAAGTGAGAG  
Asp Arg Trp Gly Arg Lys Pro Thr Leu Thr Leu Gly Phe Leu Val Met Ala Ala Gly Met Gly Val Leu Gly Thr Met Met His Ile Gly Ile His Ser  
-----galP-----

CGTCGGCGCAGTATTTCCGCCATCGCCATGCTGCTGATGTTTATTGTGCGGTTTGGCCATGAGTGGCGGTCCGCTGATTTTGGGTACTGTGCTCCGAAATTC 1400  
GCAGCCGCGTCATAAAGCGGTAGCGGTACGACGACTACAAATAACAGCCAAACGGTACTCAGGGCCAGGCGACTAAACCCATGACACGAGGCTTTAAGT  
Pro Ser Ala Gln Tyr Phe Ala Ile Ala Met Leu Leu Met Phe Ile Val Gly Phe Ala Met Ser Ala Gly Pro Leu Ile Trp Val Leu Cys Ser Glu Ile Gln  
-----galP-----

FIG. 14B

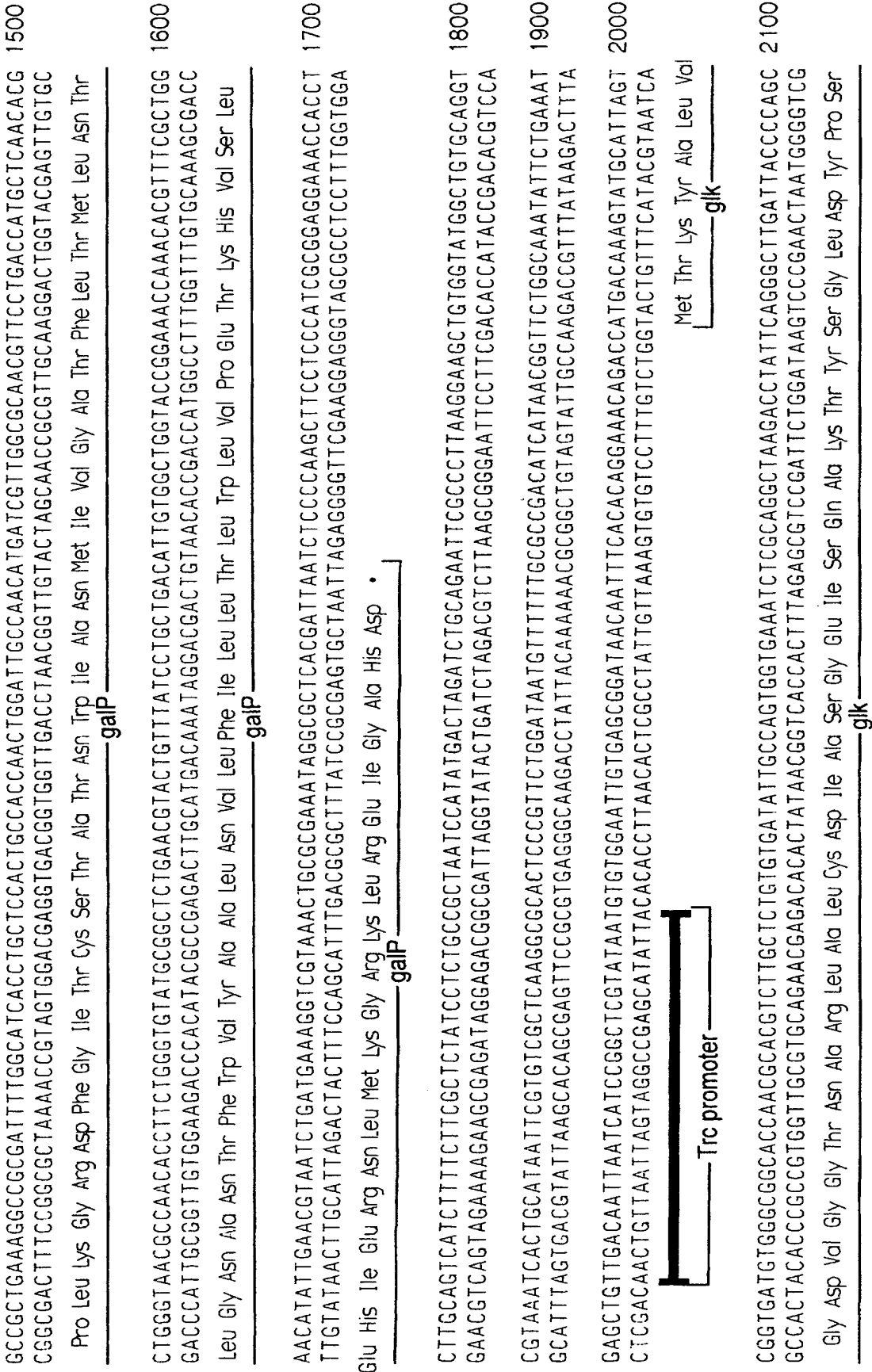


FIG. 14C

CTCGAAGCGGTCATTCCGCTTATCTTGAAGAACATAAAGTCGAGGTGAAGACGGCTGTATTGCCATCGCTTGCCCAATTACCGGIGACTGGGTGGCGA 2200  
GAGCTTCGCCAGTAAGCGCAAAATAGAACCTTCTTGATATCCAGCTCCACTTCTGCCGACATAACGGTAGCGAACGGTTAATGGCCCACTGACCCACCGCT  
Leu Glu Ala Val Ile Arg Val Tyr Leu Glu Glu His Lys Val Glu Val Lys Asp Gly Cys Ile Ala Ile Ala Cys Pro Ile Thr Gly Asp Trp Val Ala  
—gk—

IGACCAACCATACCTGGGCGTCTCAATTGCCGAAATGAAAAAGAAATCTCGGTTTTAGCCATCTGGAAATTTAACCAGATTTACCGCIGTATCGATGGC 2300  
ACTGGTTGGTATGGACCCGCAAGAGTTAACGGCTTTACTTTTTCTTAGAGCCAAATTCGGTAGACCTTTAATAATTGCTAAAAATGGCGACATAGCTACCG  
Met Thr Asn His Thr Trp Ala Phe Ser Ile Ala Glu Met Lys Lys Asn Leu Gly Phe Ser His Leu Glu Ile Ile Asn Asp Phe Thr Ala Val Ser Met Ala  
—gk—

GAACCCGATGCTGAAAAAAGAGCATCTGATTTCAGTTTGGTGGCGCAGAACCGGTCGAAGGTAAAGCCTATTGCGGTTTACGGTGGCGGAACGGGCTTGGG 2400  
CTTGGGCTACGACTTTTTCTCGTAGACTAAGTCAAAACCCCGCTCTTGGCCAGCTTCCATTCCGATAACGCCAAATGCCACGGCTTGCCCCGAACCCC  
Asn Pro Met Leu Lys Lys Glu His Leu Ile Gln Phe Gly Gly Ala Glu Pro Val Glu Gly Lys Pro Ile Ala Val Tyr Gly Ala Gly Thr Gly Leu Gly  
—gk—

GTTGGCATCTGGTCCATGTCGATAAGCGTTGGTAAGCTTGCCAGGCGAAGGCGGTACGTTGATTTGCGCCGAATAGTGAAGAAGAGGCCATTATCC 2500  
CAACGCGTAGACCAGGTACAGCTATTGCGAACCCATTTCGAACGGTCCGCTTCCGCCAGTGCAACTAAACGCGCTTATCATTCTTCTCCGGTAATAGG  
Val Ala His Leu Val His Val Asp Lys Arg Trp Val Ser Leu Pro Gly Glu Gly His Val Asp Phe Ala Pro Asn Ser Glu Glu Ala Ile Ile  
—gk—

TCGAAATATTGCGTGGGAAATTGGTCAITGTTTCGGCGGAGGCGTGCCCTTCTGGCCCTGGGCTGGTGAATTTGTATCGCGCAATTGTGAAAGCTGACAA 2600  
AGCTTTATAACGCACGCTTTAACCAGTACAAAGCGCTCCGACGGAAGACCGGGACCCGACCACTTAAACATAGCGGTTAACACTTTTCGACTGTT  
Leu Glu Ile Leu Arg Ala Glu Ile Gly His Val Ser Ala Glu Ala Cys Leu Ser Gly Pro Gly Leu Val Asn Leu Tyr Arg Ala Ile Val Lys Ala Asp Asn  
—gk—

CCGCCCTGCCAGAAAAATCTCAAGCCAAAAGATATTACCGAACGCGCGCTGGCTGACAGCTGCACCGATTGCCGCCGCGCATTTGTCGCTGTTTTGCGTCAIT 2700  
GGCGGACGGTCTTTAGAGTTCGGTTTTCTATAATGGCTTGGCGCGCAGCCGACTGTGACGTGGCTAACGGCGGCGCGTAACAGCGACAAAAACGCAGTAA  
Arg Leu Pro Glu Asn Leu Lys Pro Lys Asp Ile Thr Glu Arg Ala Leu Ala Asp Ser Cys Thr Asp Cys Arg Arg Ala Leu Ser Leu Phe Cys Val Ile  
—gk—

**FIG. 14D**

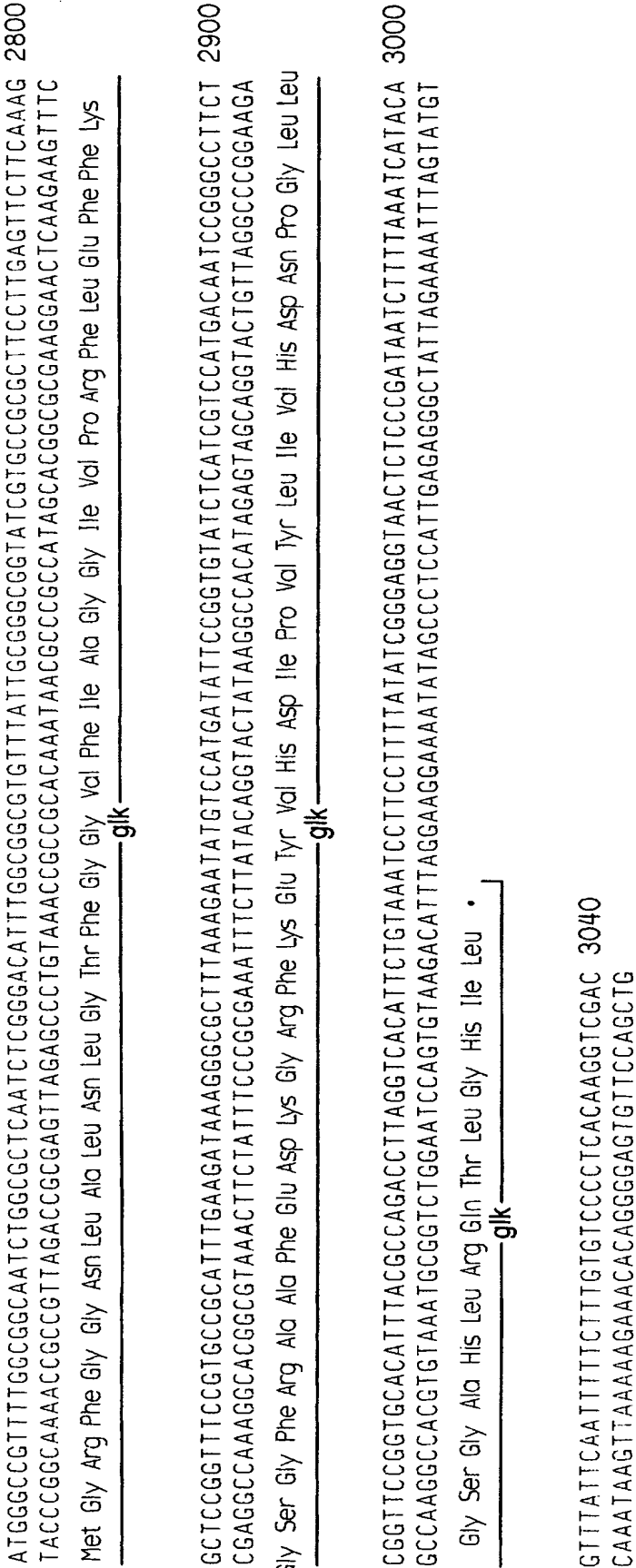


FIG. 14E